



THE DELAWARE AND HUDSON RAILROAD BULLETIN

*"The
D&H."*

DECEMBER 15, 1930

A WINTER TRAIL
THURMAN, N.Y.

“Getting on to Christmas” ::

THERE'S a little chap at our house that is being mighty good—
Keeps the front lawn looking tidy in the way we've said he
should;

Doesn't leave his little wagon, when he's finished with his play,
On the sidewalk as he used to; now he puts it right away,
When we call him in to supper, we don't have to stand and shout;
It is getting on to Christmas and it's plain he's found it out.

He eats the food we give him without murmur or complaint;
He sits up at the table like a cherub or a saint,
He doesn't pinch his sister just to hear how loud she'll squeal;
Doesn't ask us to excuse him in the middle of the meal.
And at eight o'clock he's willing to be tucked away in bed,
It is getting close to Christmas; nothing further need be said.

I chuckle every evening as I see that little elf,
With the crooked part proclaiming that he brushed his hair himself,
And I chuckle as I notice that his hands and face are clean.
For in him a perfect copy of another boy is seen—
A little boy at Christmas, who was also being good,
Never guessing that his father and his mother understood.

There's a little boy at our house that is being mighty good;
Doing everything that's proper, doing everything he should,
But besides him there's a grown-up who has learned life's bitter truth,
Who is gladly living over all the days of vanished youth.
And although he little knows it, (for it's what I never knew)
There's a mighty happy father sitting at the table too.

—Edgar A. Guest.





Once Ran "Hay-Burners"

Retired Engineman Preferred "The 605" to All Other Power on Wheels or Feet

SHORTLY after one o'clock on the morning of June 29, 1930, Engineman JOHN H. NELSON was "oiling around" locomotive 604, preparatory to taking Train No. 9 from Troy to Whitehall. Behind the tender a long dark line of Pullmans stretched back along the station platform. Just before he received the conductor's signal, Superintendent J. E. FAIRHEAD and other officials stepped up to congratulate him, and accompany him in the cab on what was to be his last round trip as a Delaware and Hudson engineer.

As they pulled out of Troy that night, across the Hudson River Bridge to Green Island, then out on the main line, the 604 settling into the rapid stride necessary to maintain her fast schedule, the engineman's thoughts drifted back to the days, fifty years before, when he had worked on the old Horse Car Railroad between South Ferry Street, Albany, and the Green Island Bridge in West Troy.

They had to work long hours on the old horse cars making five and one-half round trips over the seven and one-half mile car line in fifteen hours. Open cars carried from 60 to 100 passengers each; closed cars, somewhat smaller, ac-

commodated only 30 or 35 people. Most of the run was then made over open country, for the city of Albany, in 1880, ended where the old St. Peter's Hospital building now stands, in Broadway just north of Livingston Avenue. With the

exception of a few houses clustering around the car barns in North Albany, and the toll gate just above where Montgomery Ward's store is now located, there were no more buildings between Albany and West Troy.

The Horse Railroad's motive power had consisted of more than 100 sturdy "hay burners". In order to "make their time", the drivers had to keep the horses running much of the way. In the summer time the flying hoofs pounding the dusty pathway between the rails would send clouds of dirt flying back into the driver's face and into the car.

The long hours he had to work on the horse cars had been nothing new to MR. NELSON, for he had begun to earn his

own living at the age of nine. Born in the town of Berne, N. Y., in 1857, he had had no opportunity to attend school except for short periods during his childhood. When he was two years old his mother had died, and seven years later, he had begun to earn his board and lodging by



JOHN H. NELSON

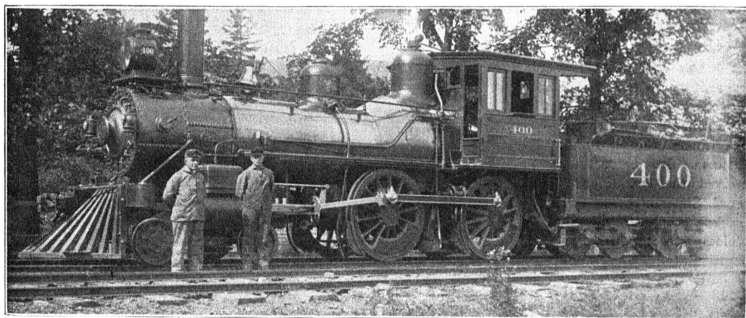
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working on a farm. At twelve, JOHN was regularly driving a team of horses, plowing, harrowing or doing other work in the fields. He was early accustomed to swing a scythe all day in a field of grain, along with men three and four times his age. When he had turned sixteen, JOHN left the farm to go to Albany in search of more remunerative employment. Driving a milk wagon for a dairyman named William Wyland had been his work for two years. Then followed fourteen years on the horse cars.

Soon after the city of Albany had recovered from the blizzard of 1888, Mr. NELSON had spoken to Hamilton Patson, then Supervisor of the Horse Car Line, about securing a position as

While he had had no preferences in the various classes of service, it so happened that most of his time had been spent on passenger trains between Troy and Albany and Whitehall. During the last six years of his career he had pulled Train No. 9 from Troy to Whitehall, returning on No. 68 to Albany the following day. For five years he had had locomotive 605 regularly and that engine had come to be known as "JOHNNY NELSON'S wagon". "Too bad I couldn't have her tonight!" he thought.

All this passed through his mind during that last ride from Troy to Whitehall. It, like all his other runs with No. 9, was uneventful and he turned the train over to the Champlain Di-



Mr. Nelson (left) and Fireman Charles Johnson in the Old Days

passenger brakeman with the Delaware and Hudson. Mr. Patson had refused this request but agreed to attempt to have him employed as a fireman. Shortly thereafter he had been sent for by Master Mechanic J. L. Corey who told him to report for duty at Whitehall the following morning.

Although it was on rather short notice, Mr. NELSON was on hand at Master Mechanic Bennett's office in Whitehall the next day, where he was assigned to engine 186 as fireman for Engineer Dan Corbett. This was the beginning of his career of forty-two years as fireman and engineer on Delaware and Hudson lines.

He thought of how, on September 26, 1896, he had become an engineman. How for many years he ran a manifest freight train between Saratoga Springs and Rouses Point, returning with a local freight. While on this run he had once made the 152-mile northward trip with 28 cars of fruit in 4 hours, 37 minutes, at an average speed of 33 miles per hour!

vision engineman right on time. In all his six years on that run, by the way, he is unable to recall a single night when "The Sleeper" failed to reach Whitehall on time.

The following morning, despite the early hour of departure, a large party was on hand to greet Mr. NELSON before he left Whitehall at 6:45 A. M. Entering the roundhouse, he paused to admire the gayly decorated 605, *his* old engine. He wondered why it should be decked with flags in front and on top, why the cab was bordered with red, white, and blue bunting. A few minutes later he knew. By special order he was to drive his old favorite on his last run.

At all the principal stations that morning there were groups of men to greet the retiring engineman whom they had known for years. Arriving in Albany, Mr. NELSON was again met by a party of officials eager to congratulate him. Mrs. Nelson was there too, with their nephew who presented him with a bouquet of flowers and wished him many years of happiness.

Railroad Statistics

Compared to Ship's Lookout in Paper Read at Agents' Meeting and Extracted Here

By J. F. FORNER, Statistician for Operations.

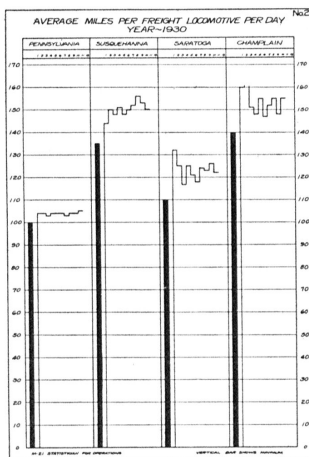
STATISTICS, however perfect, will not in themselves run a railroad, effect reforms, or secure efficiency. If sufficiently comprehensive, they will be invaluable in affording knowledge which will aid the solution of railroad problems and enable correct conclusions to be drawn. In other words, statistics may be compared to a ship's "look out". The "look out" does not keep the ship out of danger, but the information he gives enables the skipper to take the necessary steps to do so.

On our railroad a concise and complete compilation of operating statistics is prepared currently. Information necessary for the control of major operations, such as coal and freight loading, interchanges, and freight train operations is assembled daily. To afford a better understanding of our statistical practices, I will outline as briefly and clearly as possible, without going into minute details, how they are compiled, for what purpose they are used, and their value to an operating officer.

Our statistics are grouped under four general headings, namely: Locomotives, Cars, Trains, and All Other, and they will be treated in that sequence.

Under the heading of Locomotive Statistics the most important factors used, and upon which all related data is developed, are locomotive hours and locomotive miles.

Locomotive hours are divided into four classifications, namely: road time, time spent at terminals, time stored, and time unserviceable undergoing repairs. The road time by classes of service is obtained from enginemen's time slips, and other time is taken from daily reports of the



Mechanical Department. The number of locomotives by classes or service, and separated between those serviceable and unserviceable, is obtained by dividing the total hours in each group by the total calendar hours in the month. The other important factor is locomotive miles, which represent the distance run by each locomotive. These also are obtained from the enginemen's time slips.

Locomotive miles in themselves indicate nothing but volume, but when used in conjunction with the other operating factors they are of real value. Record of light locomotive miles is main-

tained separately and watched very closely, because of their non-revenue producing nature. One important operating average resulting from a combination of locomotives and locomotive miles is "Average Miles per Locomotive per Day." This indicates the average distance run each 24 hours. Also, when compared with a fixed standard which has been worked out for each operating division, it is a check as to whether more engines than necessary are being used.

In this connection, it may be interesting to say a few words about fuel records from a consumption standpoint. Fuel is charged to locomotives on the basis of hours in each class of service. Fuel consumption is generally expressed in two ways: "Fuel consumed per locomotive mile" and "Fuel consumed per 1000 gross ton miles." Fuel records on a locomotive mile basis are maintained by classes of service as well as operating divisions and are of value in that they indicate an increase or decrease in consumption on a unit basis. The most commonly used factors of fuel consumption are: "Fuel consumed per 1000 gross ton miles in

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freight service" and "Fuel consumed per passenger train car mile in passenger service." These two averages are of more value in controlling fuel consumption than the locomotive mile basis for the reason that they consider not only the distance traveled, but the amount of work performed as well.

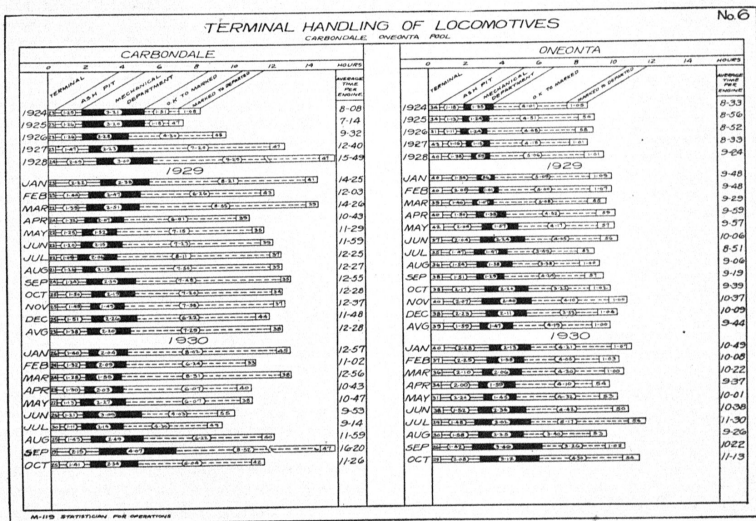
As a means of utilizing the locomotive to its fullest extent, daily records are maintained showing the number of trains and the tractive power necessary to move such trains from our principal terminals. By means of this information in conjunction with the engine rating (which as you no doubt are aware, represents what an engine of a given tractive power will move over a specified territory) and the adjusted tonnage handled, we arrive at a figure known as "Per cent of rating hauled." This is obtained by dividing the total tons handled by the total engine rating.

All of the foregoing has dealt with engines on the road. Various statistics show what takes place when an engine has completed its run. Daily figures are compiled showing what is commonly known as "Terminal Time," representing the time consumed in preparing the locomotive

for another trip. This report shows the time required to yard the train, clean the fire, make any necessary repairs, of a light nature of course, and also shows the delay from the time the locomotive is reported ready for service by the Motive Power Department until it is needed by the Transportation Department. The latter is important in keeping the number of engines to a minimum consistent with efficient and economical operation. Also in connection with terminal handling, records and graphic charts are made showing by points, the number of roundhouse employees, man hours worked, engines despatched, and man hours per engine despatched. This provides a check whereby roundhouse forces are maintained consistent with the number of engines being handled.

This brings us to those engines temporarily out of service of which there are two classes, stored and unserviceable. A stored engine represents one in serviceable condition for which, by reason of business conditions, there is no immediate demand.

As a safeguard and to prevent depletion of potential locomotive miles, records are maintained



of locomotives undergoing classified repairs. By potential locomotives is meant that every locomotive coming out of the shop after receiving classified repairs, under ordinary operating conditions, is good for a certain potential mileage. The aggregate of these miles for all locomotives released from the shop in a given period should equal or exceed the mileage produced by active locomotives in the same period.

For the purpose of controlling the locomotive operating costs, monthly tabulations are made showing the following costs per locomotive mile operated: repairs, fuel, wages, water, lubricants, other supplies. In addition, there is shown the total amount of fuel, lubricants, and waste consumed as well as the cost and the mileage produced on a unit basis. This information when compared with figures covering prior operations, gives the operating officer a picture showing the trend of his locomotive costs.

From locomotives let us turn to another vital unit in railroad statistics, which is the car. Cars and the part they play in railroad operation make necessary extensive statistical compilations to record their activities and provide information for any improvement in their use either individually, or collectively in a train. Daily records are maintained showing the total number of car movements both loaded and empty by direction and operating division as well as the total cars to be moved as of 6 A. M. daily.

This record of car movements is a valuable one. In the case of loaded cars it furnishes a day to day record of the volume of revenue business moving. In the case of total cars moved, it indicates the volume of work performed from the standpoint of expense. The factor of "Cars on hand to move at 6 A. M." is equally important as it portrays the condition of the railroad and prevents any accumulation of cars which would, of course, result in delay and unnecessary expense. This factor is also essential to the proper operation of pooled locomotives. Daily

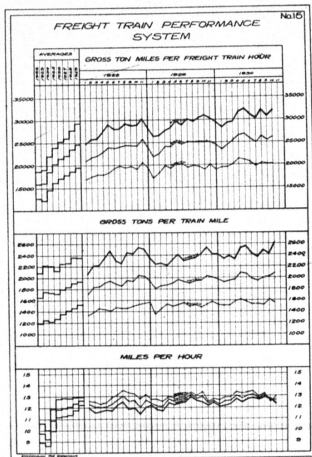
reports are kept on the number of cars interchanged, both loaded and empty, which is indicative of the volume of business coming to us from our connections and is important as it is the only daily record by which this item can be watched. In this connection a daily report is made of cars of all freight originating on our line.

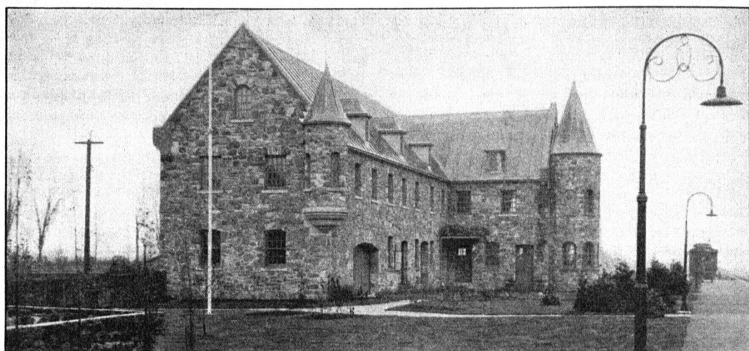
Another daily report shows the average delay to cars passing through yards, which, (when compared with a fixed standard delay consistent with economical operation) is of particular interest in that it indicates the promptness with which cars are handled through yards. Further control of cars moving through yards is made possible by a daily record maintained for all yards, of yard switch engine hours in relation to cars despatched. If the number of cars despatched per switch engine hour decreases, it is an indication that the switch engine hours are not keeping pace with the reduction in cars handled and that curtailment of yard engine hours should be considered.

The foregoing has dealt only with what is commonly termed the live or active car. Records are also maintained of cars out of service by reason of their being stored during periods of car surplus, or crippled and awaiting or undergoing repairs. On cars held crippled, daily record is kept indicating by points the number of cars repaired. This furnishes information that helps to prevent an accumulation of bad order cars; an undesirable condition in that it interferes with the expeditious movement of loaded cars. In the case of crippled foreign cars, the question of per diem enters into the prompt release of this equipment.

A record similar to the one explained in connection with locomotives is kept for all car repair points and shows the number of men, man hours, cars repaired, and man hours per car repaired, which helps to regulate repair forces consistent with the number of cars repaired.

(Concluded on page 379)





New Station At Lacolle, P. Q.

Picturesque Structure Provides Commodious, Offices for Customs and Immigration Forces, In Addition to Quarters for the Various Railway Departments

ONE of the finest station buildings of its size on the American continent is that of the Napierville Junction Railway Company, The Delaware and Hudson's Canadian subsidiary, at Lacolle, Province of Quebec.

The public opening of the building on November 17th was attended with considerable ceremony, special trains being operated from Montreal and Albany to convey official parties representing the managements of the two railways to the station where they were received by a large delegation of local officials and townspeople.

Because of the location of Lacolle on the Canadian-American border, the dedication of the structure was an affair of no little international importance. Ranking as one of the most important points of entry from the United States into Canada, the station will be viewed by thousands of travelers of both countries.

A picturesque specimen of Norman architecture, the appropriateness of which was suggested by COLONEL J. T. LOREE, the new station serves admirably to prepare the visitor from the United States for the French atmosphere of the historic

province of Quebec. It is built of field stone with a roof of sheet copper which gives it a strikingly beautiful appearance.

In addition to its primary purpose as a railway station it also furnishes convenient and commodious quarters for the Canadian Immigration and Customs Officers, suites for whom are provided on the second floor of the building. A very secure detention room is also included for the use of persons who are not allowed to cross the international boundary.

On the first floor, in addition to the usual passenger waiting room and ticket office, the building contains freight and baggage rooms, a store-room and a tool and motor-car room occupied jointly by the section men and signal maintainers.

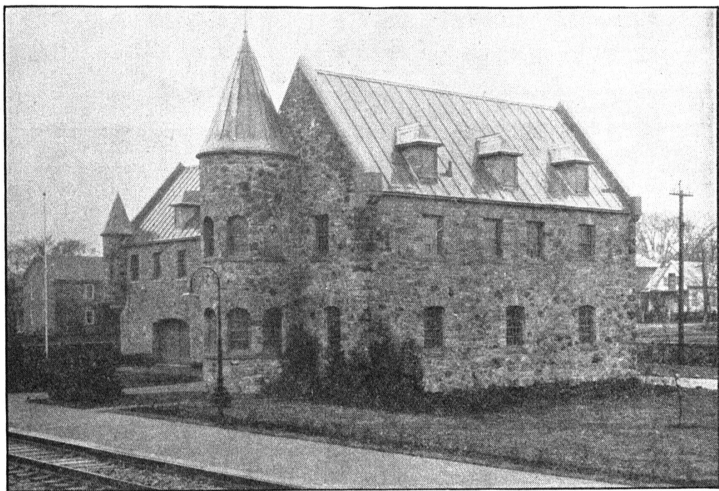
Among the unique features of design is the incorporation of a 3-color electric light signal in the upper window of the North and South sides of the tower at the front of the building, replacing the usual manually operated "order-board".

From his office in the first story of the tower the agent or operator on duty may display either

a red, yellow, or green signal to an approaching train by inserting a plug in a jack located before him on his desk. A telltale light of the same color as has been lighted in the tower immediately flashes on in front of him so that he is at all times aware of the signal which is being displayed. In addition a white pilot bulb, which is always lighted when a signal is displayed, indicates by its failure to light that the signal light has failed and must be repaired. A red

Addresses were also made by Reverend Father Victor Goeffrion, who formally dedicated the edifice, and His Worship Mayor Landry of Lacolle.

The party then adjourned to the Lacolle Inn where a banquet was served during the course of which there were addresses by Mr. Vincent Dupuis, M. P., Mr. M. Rheame, M. P., Mr. W. J. Egan, Deputy Minister of Immigration, Mr. D. D. Lennie, Chief Inspector, Department



North End: Color-light Signal Shows in Upper Window of Tower

light on the operator's desk is lighted upon the approach of trains from either direction, a warning bell being rung at the same time.

Commercial alternating current is used for the normal operation of the signal system while an automatic cut-over to an emergency storage battery source of power operates upon the failure of the alternating current.

The ceremony attendant upon the Public Opening of the station was quite impressive. The contractor, Mr. C. J. A. Cook, turned over the keys to VICE PRESIDENT F. P. GUTELIUS, and the doors were opened by Miss Phoebe Gutelius.

of National Revenue, His Worship Mayor Landry, and MR. F. P. GUTELIUS, the Honorable F. L. Beique, K. C., presiding as toastmaster.

The Delaware and Hudson quartet rendered several selections during the program while an orchestra furnished dinner music for the affair, arrangements for which were under the direction of MR. SHIZUO HIRAHARA, Assistant Engineer, who supervised the construction of the building.

His letter from Italy read: "I'm enjoying Florence immensely."

Her answer read: "You can stay in Europe; I am having a great time with Oliver."—*Clipped.*

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Permission is given to reprint, with credit, in part or in full, any article appearing in THE BULLETIN.

All communications should be addressed to the Supervisor of Publications, Delaware and Hudson Building, Albany, N. Y.

Vol. 10

December 15, 1930

No. 24

Peace On Earth—

THE lovely legends of the day; the stories and the songs and the half-fairy lore that gather around it; the ancient traditions of dusky woods and mystic rites; the magnificence or simplicity of Christian observance; . . . the lighting of Christmas trees and hanging up of Christmas stockings, the profuse giving, the happy family meetings, the dinner, the game, and the dance—they are all natural signs and symbols, the flower and the fruit, of Christmas. For Christmas is the day of days which declares to the universal human consciousness that peace on earth comes only from good will to men.

—George W. Curtis.

What You Can Do!

A FRENCH mechanic who worked in many different factories in America was impressed by a phrase he often heard. When he presented himself to a foreman he would be asked what he could do. He would recite his qualifications, and the foreman would listen politely and invariably would say, "Well, report for work tomorrow, and we'll see what you can do."

Surely this is a fine tribute to the American attitude.

A story has long been current which also illustrates the point. A Boston youth, just out of college, asked a prominent friend of the family to help him obtain a job in a New York bank. The friend wrote a letter of introduction to a Man-

hattan banker in which he extolled the young man's family, explaining that his great-grandfather had been governor of Massachusetts, that his grandfather had been a United States Senator, and that his father was a distinguished member of his community. The New York banker read the letter, and after surveying the handsome applicant, remarked, "I fear that our friend who has written this note is misinformed about our requirements. We hire men for banking and not for breeding purposes."—*Through the Meshes.*

Exports and Imports

PERIODICALLY statements are issued showing the volume of the nation's exports and imports. These statements are very misleading because of the omission of some known and many unknown items that substantially affect both movements. Among these invisible items are expenditures of tourists, interest and dividend returns upon private investments, public debts, short term capital engaged in banking, trading, investment and speculation, and remittances to relatives from wages or other income.

The statement of the Government of the excess of exports over imports of merchandise in 1929 was \$841,000,000 as against \$1,037,000,000 in 1928.

Including such figures as are known or may be estimated with fair accuracy the balance in 1929 would be:

	In Favor United States	Against United States
Excess of Merchandise	\$841,000,000	
Expenditure of tourists		\$659,000,000
Income from private investments.	562,000,000	
Movement of capital		373,000,000
Total	\$1,403,000,000	\$1,032,000,000
Net balance...	\$371,000,000	

The unknown items would apparently all work to reduce the advantage of the United States. With consideration of the known items only, the assumed credit balance in exports of \$841,000,000 is reduced to the sum of \$371,000,000.

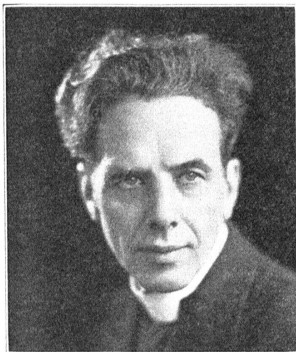
It is a wise man who knows his own business; but it is a wiser man who thoroughly attends to it.—H. L. Wayland.

Railroader Becomes Bishop

*From a Start as a Delaware and Hudson Telegrapher Robert Nelson Spencer
Now Heads Episcopal Church
of Western Missouri*

THE consecration on October 28, 1930, of Reverend Robert Nelson Spencer as Bishop of the West Missouri diocese of the Episcopal Church was the crowning event in the remarkable career of a former Delaware and Hudson employee.

Bishop Spencer was born on a farm at Tunnel, on the Susquehanna Division, on February 18, 1877. At the age of seven a sled collision resulted in an injury to his right arm rendering it useless for a number of years. Although a complete cure was effected in his 14th year, the weakness of his arm prevented a realization of his boyhood dream of becoming a trainman. Soon thereafter his mother died, and Spencer entered the service of the Company, as messenger boy at Tunnel station. Here he learned telegraphy under S. B. Monroe, agent, and G. W. Monroe, operator, but was prevented by the rules of the Company from securing employment as a telegraph operator until he had reached the age of eighteen. By that time Spencer had decided to become a minister. The fact that he had received but little education presented a formidable obstacle.



Bishop Robert N. Spencer

In October, 1895, while picking apples on the farm of F. R. Dann, day telegraph operator at East End of the tunnel, Spencer told a fellow-picker of his desire, stating that he was then 18 years old, had spent but two winters in a district school, and was unable to continue his studies as he had to earn his living. Acting upon the advice of his co-worker, Spencer wrote the president of Wyoming Seminary who aided him by giving him a job as janitor in the seminary. While so employed, he completed the seminary course, doing his elementary school work after hours. He studied

at Dickinson College, at Carlisle, Pa., at Nashotah House, a theological seminary in Wisconsin, and graduated from the Kansas Theological School at Topeka, in 1904. Ordained deacon in the same year and priest in 1905 by the Bishop of Kansas, Mr. Spencer served for several years as chaplain, without commission, at Fort Riley. Since 1907 he has served continuously as rector of Episcopal churches in Junction City, Kansas, Springfield, and Kansas City, Missouri, and as bishop coadjutor of the West Missouri diocese until his elevation to the bishopric.

Railroad Statistics

(Continued from page 375)

To indicate the comparative car costs, figures are compiled monthly on a car mile basis showing cost of repairs, lubrication, lighting, heating, cleaning, and other supplies and expenses. These figures cover both freight and passenger car operation where applicable, and from this report the trend of car costs can be readily observed.

From the standpoint of operating statistics further activity of the car can best be followed by considering the preparation and handling of the conductor's wheel report and the use made of it.

For each freight train operated, the conductor prepares what is known as a wheel report. This report is in a sense a consist of the train and shows the operating division, direction, where train

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originated and time departed, where train terminated, and time arrived, train number or class, caboose number, engine number or numbers, initial and number of each car handled in the train, kind of car and whether loaded or empty, where car was picked up and date, and where left and date, contents if loaded, final destination, weight in tons of car and contents, and weight of contents only.

At the completion of each trip the reports are forwarded to Albany where there is inserted, after each car or block of cars making the same movement, the mileage involved, the number of loaded and empty cars, total gross and net weight. Hollerith cards are punched for this information. This involves approximately 35,000 cards monthly. At various intervals during the month, these cards are run through the sorting and tabulating machines and the following information developed by operating divisions and directions:

1st—Loaded and empty car miles and gross and net ton miles representing for each of these factors the number of units multiplied by the distance moved. (The word gross as here used, represents the weight of car and contents expressed in tons of 2,000 pounds.)

2nd—Train hours which represents the elapsed time trains were on the road between the initial and destination terminals.

It might be of interest to state here that after the Hollerith cards have been punched to indicate the units of operation before mentioned, no further clerical effort is required to develop the ton miles and car miles; the Hollerith machine completes the job unaided.

For passenger trains, the only information assembled is car miles, and these are compiled by trains and classified by types of equipment. Locomotive and train miles are developed from engineers' mileage slips which are a part of the time slips and are compiled by operating divisions and classes of service. These figures in themselves, indicating as they do, volume only, are used as a basis for developing various averages which are of utmost importance in determining the efficiency with which a division is operated.

First let us consider miles per car per day, which is arrived at by dividing the total freight car miles by the average number of cars on line daily, times the days in the month. This represents the distance traveled daily by the average car on line and is particularly influenced by the number of cars not moving, such as stored and crippled cars. During periods of car shortage it is necessary to watch this item very closely, as any decrease in daily mileage per car is almost

immediately felt in an already depleted car supply.

Next in importance is net tons per loaded car, which is a combination of the net ton miles and loaded car miles and is used to show whether or not the available car capacity is being fully utilized. This factor is not only one of great importance during times of car shortage, but should be carefully watched at all times to avoid the unnecessary use of equipment resulting in increased operating costs.

Another significant factor is per cent empty to total car miles. Although a certain amount of empty car miles is unavoidable due to one way traffic such as coal, ore, etc., it is important to know regularly what this amounts to with a view of keeping it as low as possible.

As an indication of the value of the individual car in terms of service performed and as an index of car activity as related to freight train operation there is developed a factor known as "Net ton miles per car per day" which is a combination of net ton miles and cars on line daily.

How locomotives and cars are treated statistically as separate units has been discussed to this point. Now let us consider what they mean when coupled together in the form of a train.

A vital factor in train operation is "time on road". Daily records are maintained showing the average time on road for all trains in the principal freight pools such as Wilkes-Barre-Oneonta, Carbondale-Oneonta, Binghamton-Mechanicville, Oneonta-Mechanicville, Oneonta-Whitehall, and Whitehall-Rouses Point. This record enables the operating officer to keep a constant watch on his operating costs and affords him a medium for keeping overtime to a minimum. The time on road is indicated on the conductor's wheel reports and represents the elapsed time from departure from initial terminal until arrival at destination terminal.

In keeping "time on road" within economic limits a factor known as "train miles per freight train hour" commonly called "miles per hour" is arrived at by dividing the freight train miles by the freight train hours. This index of train operation is an important one from an expense standpoint and should be constantly watched.

While it is essential to keep "time on road" under control, it is likewise equally essential that each train be fully loaded. This is measured by gross ton miles per freight train mile known as tons per train. There is no economy in reducing the tons per train beyond that which it is possible to handle with no increase in operating costs. To keep the operating officer informed as to the vol-

time of work performed for each hour of train operation, the factors of gross and net ton miles per freight train hour are developed by dividing the ton mileage both gross and net by the train hours. Net ton miles per train mile is used to indicate any fluctuation in the paying or revenue load per train.

Aside from physical statistics which have been dealt with up to now, compilations are made on the first and fifteenth day of each month, showing the estimated operating revenue earned and estimated operating expenses incurred. The expenses are subdivided by departments, namely: Maintenance of Way, Locomotive, Car, Traffic, Transportation, General, and Miscellaneous. In arriving at the revenue earnings, consideration is given to the number of loaded cars moved in the period to be covered, as well as any influential changes in the character of traffic moved. In connection with the expenses, the activities of the respective departments are reviewed thoroughly and an estimate made of the probable expense. As operating expenses are generally considered in direct relationship to operating revenues, this report also shows the ratio of each department's expense to the revenue. These percentages are commonly termed operating ratios and indicate what part of the revenue dollar is expended by each department. Further than this, when such ratios are used in a comparative way it shows the trend of expenses in relation to revenue. This comparative information is of vital importance inasmuch as it is furnished two weeks in

advance of the actual figures, and affords advance information for the control of expenses consistent with business.

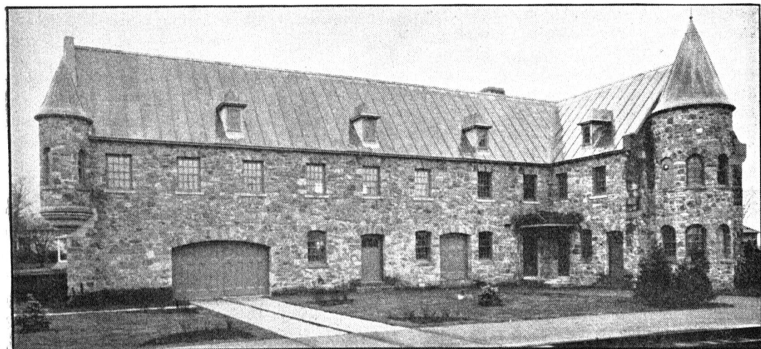
In the presentation of statistical information covering the various physical elements of operation, it is quite essential that such statistical data be assembled and made available as promptly as possible following the close of a period, such as a day, week, or month, as the case may be, and that the form of presentation be concise, yet cover all the facts. There is nothing more difficult to analyze and to understand than reports containing masses of figures. Therefore, to aid the operating officer in grasping a situation quickly, data as far as possible is presented in the form of graphic charts. Further, one month's operating figures in themselves are of little value unless they are compared with figures covering previous operations. It is in this connection that charts play an important part, for curves covering factors for any period can be plotted and an operating officer at a glance can visualize just what has taken place and be in a position to make corrective steps if necessary, to remedy any irregularity that presents itself. On our railroad this practice is followed quite extensively.

Stude: Sir, I want permission to be away three days after the end of vacation.

Dean: Ah, you want three more days of grace?

Stude: No, sir. Three more days of Gertrude.

Lacolle's New Station—Front View



Recipe For Christmas Pudding

TAKE some human nature—as you find it,
The commonest variety will do—
Put a little graciousness behind it,
Add a lump of charity—or two.

Squeeze in just a drop of moderation;
Half as much frugality—or less,
Add some very fine consideration,
Strain off all poverty's distress,
Pour some milk of human kindness in it,
Put in all the happiness you can.

Stir it up with laughter every minute,
Season with good-will toward every man.
Set it on the fire of heart's affection,
Leave it till the jolly bubbles rise,
Sprinkle it with kisses—for confection,
Sweeten with a look from loving eyes.

Flavor it with children's merry chatter,
Frost it with the snow of wintry dells,
Place it on a holly-garnished platter,
Serve it with the song of Christmas bells.

—*Eric Magazine.*

Planning Ahead

MOST of us make the mistake of expecting too much from life. If we go to bed at night after a dull day, we are depressed because nothing happened that interested us. We found our radio dull, our books dull, our magazines dull, and our friends dull.

The fault is our own because we did not plan our day.

It isn't luck that fills the days of some people with zest and happiness. Such days are the consequence of careful selection and planning.

To obtain the utmost pleasure from reading, the wise man reads book reviews, consults friends whose tastes are similar to his own, and visits bookstores and the library. He chooses books that he knows he will like. The man who finds reading a bore is the type that waits until he has nothing else to do and then walks to the corner drugstore where he takes anything that is available.

Those who sneer at the radio are people who have never owned one or who open it up the minute they walk into the house and keep it going until they leave. The way to get enjoyment from a radio is to scan the program that appears in the newspaper and carefully select the

half hour or hour that appeals to you. Keep the instrument silent until this number appears. Then give full attention to it. To expect a radio to amuse and uplift you six hours a day all through the year is stupid. It is equally stupid to expect the radio to produce an enjoyable half hour at any moment, day or night, that suits your convenience. Planning and selection are necessary in this as in anything.

Enjoyment of food is also contingent on forethought. The woman whose meals are worth eating cannot dash into a delicatessen store on her way home from a bridge party and expect her family to relish dinner. She must tentatively plan meals a week in advance and consult her grocer or butcher every morning. Otherwise the family will be eating canned peas four nights a week when they might just as well be enjoying fresh asparagus, fresh peas, and new potatoes.

Social enjoyment of friends requires the same kind of planning and selection. Occasionally a delightful evening can be arranged at the last minute, the spontaneity and informality of the occasion contributing to the gayety. But such synchronization is rare. Unless guests are engaged in advance they are not available or are not in the mood for visiting.

Life offers little unless we exert ourselves. Know what is going on in your city. Look ahead. Don't wait for boredom to overtake you. If life is to be interesting, we must plan to make it interesting.—*Through the Meshes.*

It is the duty of every man to protect himself and those associated with him from accidents which may result in injury or death.—*Abraham Lincoln.*

The absent-minded professor called his biology class to order shortly after the lunch hour.

"Our special work this afternoon," he said, "will be cutting up and inspecting the inward workings of a frog. I have a frog here in my pocket to be used as a specimen."

He reached into his pocket and pulled out a paper sack, shook its contents on the table, and out rolled a nice looking ham sandwich. The professor looked at it, perplexed, scratched his head and muttered:

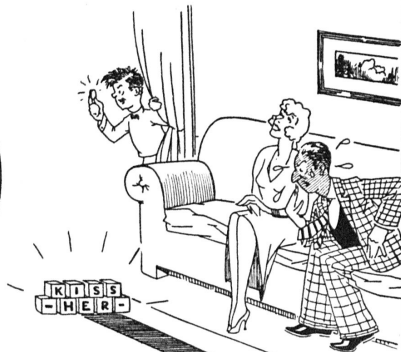
"That's funny; I distinctly remember eating my lunch."

Clicks from the Rails

WHAT TO GIVE??



FOR THE TALKATIVE BLOKE -
AN "AIR BRAKE"



A "BLOCK SIGNAL" SIGNAL FOR
THE BASHFUL SUITOR



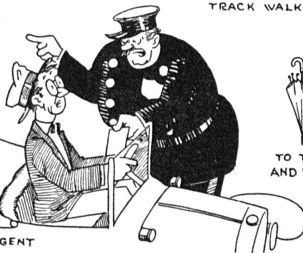
FOR THE INFORMATION
CLERK



A "TIE" IS VERY
APPROPRIATE FOR THE
TRACK WALKER -



TO THE STATION AGENT
A "TICKET"



TO THE "LOST
AND FOUND CLERK



FOR THE PRETTY
MAID-A---AH---
OH, A VERY MERRY
CHRISTMAS -

CASSEL

COURTESY MUTUAL MAGAZINE

When Christmas Comes

3

HAVE you any old grudge you'd like
to pay?
Any wrong laid up from a bygone
day?

Gather them all now, and lay them away

When Christmas comes.

Hard thoughts are heavy to carry, my friend
And life is short from beginning to end;

Be kind to yourself, leave nothing to mend

When Christmas comes.

—William Lytle.

